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ABSTRACT

The University of Pennsylvania Libraries' Preservation Planning Project was designed to explore new ideas for planning and operating a preservation program for the Penn Library. The first goal of the project was to study the feasibility of an organizational plan that would put the preservation effort under the direction of a small internal staff who would contract out most of the preservation work. The second goal was to see if a strategic planning approach could be used to assist in designing a preservation plan for the Penn Library's collection that would consider local, regional, and national preservation programs as well as the needs of a single institution. The planning project was divided into nine specific tasks: (1) heighten staff and user awareness; (2) define the collections; (3) assess environment, storage, and security; (4) assess collection condition; (5) analyze existing user survey data; (6) analyze resources and costs; (7) define treatment options and costs; (8) define preservation selection criteria; and (9) develop a program management model. Information on the status of preservation at Penn Library prior to the project is provided as a basis for judging how a similar project might work in another institution, and special aspects of the planning process are discussed, including the consultant-driven planning model, preservation selection, and evaluation of the planning effort. Activities associated with the first attempts to work out service arrangements with The Conservation Center for Art and Historic Artifacts (CCAHA) and The MicrogrAphic Preservation Service (MAPS) are described. Microfilming, color microfilming, and microreproduction techniques are explained as they are currently used by MAPS to reformat fragile materials, and library contacts with mass treatment, photocopying, and library binding services are briefly described. Finally, a working model for a service-contracted preservation program is proposed that includes research and analysis, goal-setting, strategic planning, and operational planning. (DB)

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REPORT

ED 338 274

REPORT ON

THE PRESERVATION PLANNING PROJECT

UNIVERSITY OF PENNSYLVANIA LIBRARIES

IR 015 274

SEPTEMBER 1991

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COMMISSION PREFACE

Early last year, the Commission contracted with the University of Pennsylvania and the Conservation Center for Art and Historic Artifacts (CCAHA) to generate guidelines and collect data applicable to other institutions as part of a larger preservation project being undertaken at the university. The larger project, funded partly by the Andrew W. Mellon Foundation, had two major goals. The first was the formulation of a plan for the preservation of the university's collections using a broad, strategic approach that considers not only local needs, but also regional and national programs. The second goal was the development of a management strategy to enable a small internal staff to work in concert with regional preservation service organizations, which would supply the resources needed by the university to operate its preservation program.

This final report, assembled by Peter G. Sparks who served as the project's consultant, is being distributed on a complimentary basis to the Commission's mailing list. Additional copies are available at no charge while supplies last.

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UNIVERSITY OF PENNSYLVANIA LIBRARIES
REPORT ON THE PRESERVATION PLANNING PROJECT

I. INTRODUCTORY REMARKS

This report reviews both the accomplishments and the setbacks of the University of Pennsylvania Library's Preservation Planning Project, believing that other institutions can best learn from a report that is explicit about what worked and what needed improvement.

In the fall of 1989 Robert J. Strauss (Director of the Conservation Center for Art and Historic Artifacts), Paul H. Mosher (Vice Provost and Director of Libraries at the University of Pennsylvania), and Peter G. Sparks (former Director for Preservation at the Library of Congress) met to discuss a project that would explore new ideas for planning and operating a preservation program for the Penn Library. A proposal for support of this project was funded in January 1990 by The Andrew W. Mellon Foundation, The Commission on Preservation and Access, and the Penn Library. The project was scheduled to start in June of 1990 and to be completed in twelve months.

The Commission was interested in publishing a report on the two new management ideas to be explored in the project; it was less interested in documenting the development of the information that would allow the Penn Library actually to begin their long-awaited formal preservation program. This was understandable, since the elements of the planning process itself were not necessarily new to the library field. However, in practice, several aspects of the planning process did generate approaches and products new enough to be worth reporting, so that other institutions might be able to adapt them for their own programs.

II. THE INITIAL PROJECT CONCEPT

A standard approach to starting a new preservation program in a large research library has been to mount an internally-managed, institution-wide preservation planning effort for a period of about one year, followed by a longer-term build-up of full-time internal staff with its own space and equipment. This approach has led to doing most of the preservation work in-house, while contracting out for library binding and, in some cases, reformatting. However, in many libraries today, developing an internally-staffed preservation program is not possible, because such an extensive program cannot be financed when the library's budget is tight and can be expected to remain tight. Moreover, many libraries have found that the establishment of new preservation programs -- other than ad hoc binding or reformatting projects -- must compete with other capital-intensive priorities such as automation efforts, improved physical facilities, and improved delivery mechanisms. Furthermore, many preservation processes,

which at one time were only available if provided locally, are now available from commerical or other volume providers.

It is apparent that interest in library preservation has reached a [illegible] at many institutions where some alternative approaches to planning and program organization could be tried. The Penn Library Preservation Planning Project explored the possibilities of a flexible management strategy to minimize in-house staffing, optimize capacity to use fluctuating library resources, concentrate costs on work products rather than internal overhead, and otherwise get more preservation work done with the limited funds in hand. This project also took a broader approach to planning, utilizing the kind of strategic approach that considers relevant options and trade-offs as different decisions are considered.

The first goal was the feasibility of an organizational plan that would put the preservation effort at the Penn Library under the direction of a small, well-qualified internal staff of one or two persons and would contract out most hands-on preservation work, some program planning, and some mid-level management tasks to qualified regional preservation service organizations. In this way, the need for long-term commitments to internal preservation staff, space and equipment would be minimized; funds could then be optimized by reducing paying for treatment services instead of overhead expenses. Levels of contracted work would fluctuate somewhat with the yearly budget and fundraising success, more getting done in some years than in others, but the overall preservation effort would move steadily forward year after year on many fronts. This approach has been used successfully in limited ways by institutions that contract out for binding and reformatting, but it has not been developed in a more comprehensive way for all of a library's preservation needs.

The time seemed right for this kind of contract-based project, since the outside regional service organizations have never been as fully developed as they are at the present time. In addition, the regional service organizations need to develop new business opportunities in order to survive in the 1990's.

The second goal in this project was to see if a strategic planning approach could be used to assist in designing a preservation plan for the Penn Library's collection. Such a plan would consider not only collection condition and the single institution's needs, but also local, regional, and national preservation programs and needs as well as newly available technologies, in order to choose in a strategic way the best long-term treatment options for various types of collections.

III. PROJECT OBJECTIVES

At the outset the planning team envisioned three objectives, and by the end of the project it was apparent to us that there was a fourth.

1. Determine the feasibility of using various external service contractors to carry out specific program activities including program planning, collection preservation activities, and treatment of collection materials.

2. Determine where and how strategic planning could be used in organizing preservation program activities.

3. Develop the level of information and organization required to start up a preservation program at the Penn Library.

4. Evaluate a consultant-managed planning project.

IV. PROJECT ORGANIZATION

We divided the proposed planning project into nine specific tasks, which are explained briefly below in their order of execution. The proposed full-time equivalent staffing was about one and one-half "man-years," and the time for completion of the entire project was one year. Project organization and a timeline are given in figures 1 and 2.

Task 1. HEIGHTEN STAFF AND USER AWARENESS.

We started this task first because the support and understanding of many library staff members would be needed to insure the success of the project. We developed a plan to inform various groups of staff and library users about the project and the project timeline. This plan was implemented throughout the entire project.

Task 2. DEFINE THE COLLECTIONS.

Assemble a body of information about the collections that could be used in program planning, evaluating collection needs and preserving each specific collection. We wanted to gather information on the location, size of collection, format, type of material (i.e., paper, leather, microform, etc.), age, growth rate, physical condition, uniqueness, importance, and use patterns of the library's major groups of materials.

FIGURE 1

PENN LIBRARY PRESERVATION PLANNING PROJECT

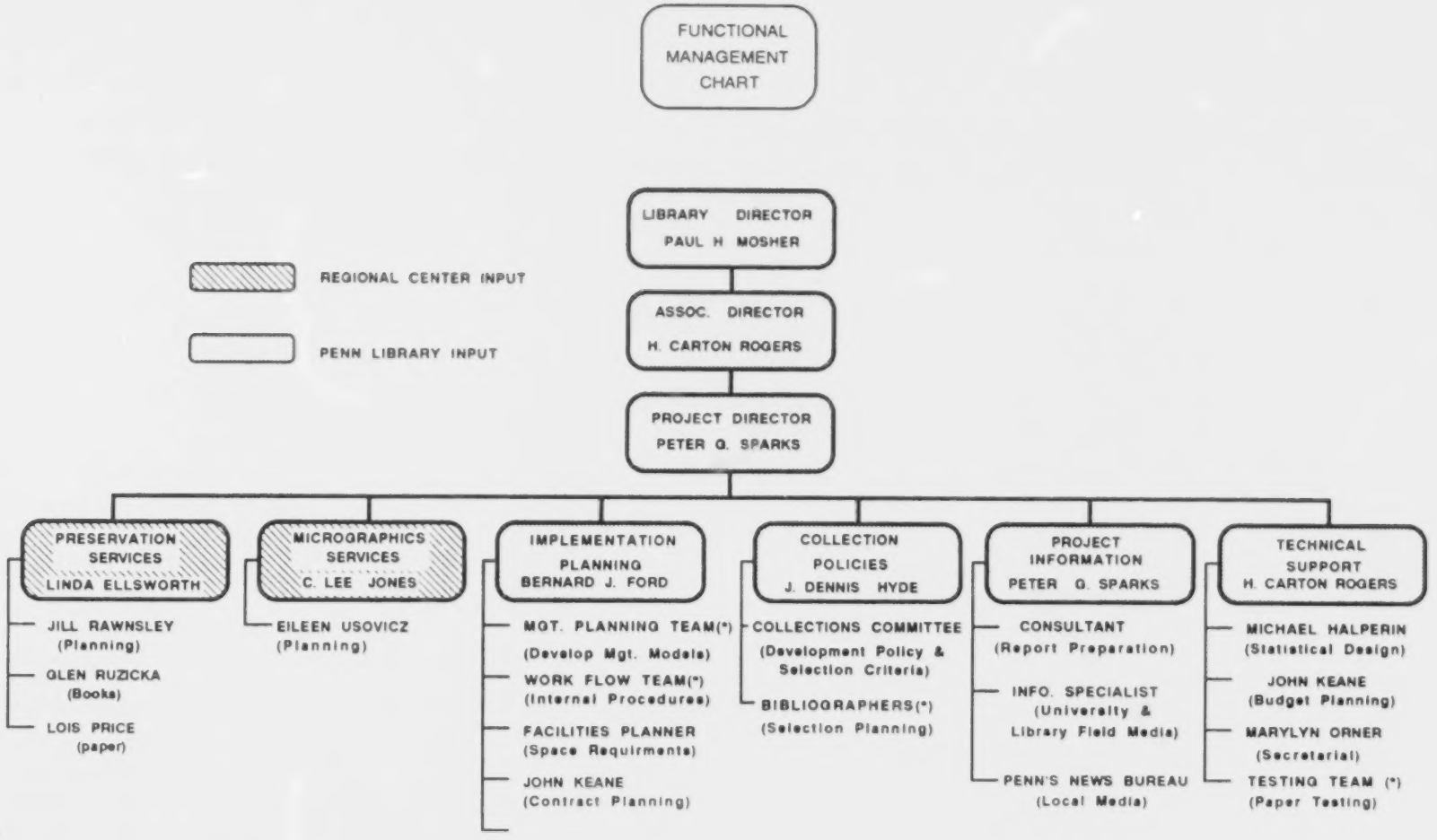
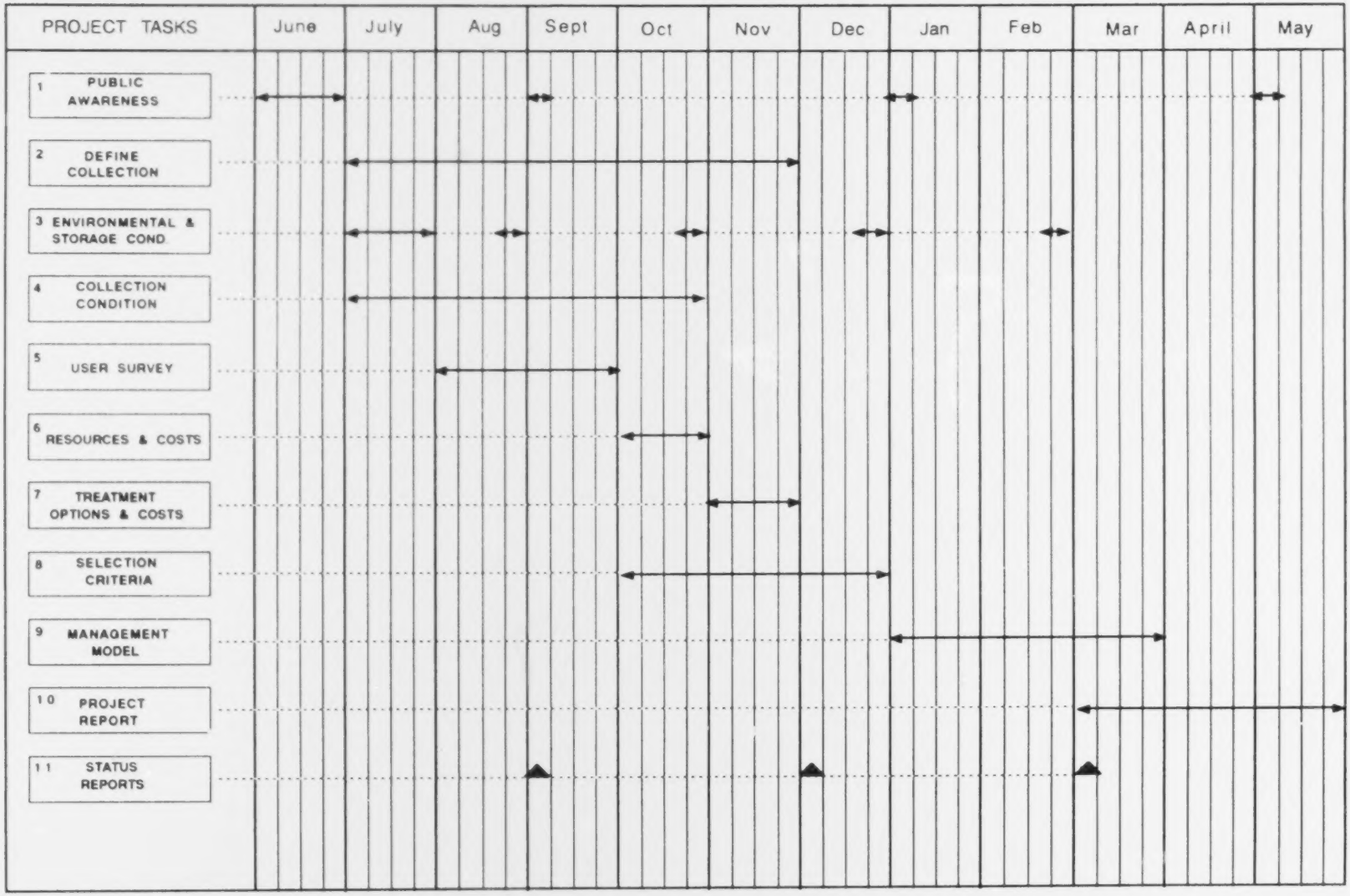


FIGURE 2 PROJECT SCHEDULE



Task 3. ASSESS ENVIRONMENT, STORAGE, & SECURITY.

Measure and observe the following for each collection location: temperature; relative humidity; pollution and particulate filtration; ultraviolet light intensity, both natural and artificial; housekeeping; evidence of pests and mold; storage furniture and materials; and building integrity. Evaluate the internal and external security systems, the fire detection and suppression systems, and the disaster-preparedness and recovery plans.

Task 4. ASSESS COLLECTION CONDITION.

We used two approaches to assess the condition of the major paper-based collections. First, the book collections in the main library and three departmental libraries were statistically sampled at the 95% confidence level. Laboratory tests and visual observation were used to determine the imprint date, binding condition, paper Ph, paper strength, and groundwood content. These data were analyzed to yield statistically valid condition information about these collections. Secondly, the condition of the rare collections was evaluated by a team of trained conservators. Condition examinations were done on a group of materials carefully selected to be representative of the collection under study. These data were analyzed to estimate the condition of four rare collections.

Task 5. ANALYZE USER SURVEY DATA.

Most research library preservation programs are organized around use. Typically, programs are established to respond to needs that arise in the course of circulation, in-house access, inter-library loan, and exhibitions. The work to be done in this task was to analyze existing data from a user survey and summarize it in a form suitable for use in planning.

Task 6. ANALYZE RESOURCES AND COSTS.

Sum up the internal support currently available at the University for the preservation program in the last fiscal year, and document the costs of the preservation services used by the Library to date.

Task 7. DEFINE TREATMENT OPTIONS AND COSTS.

With information in hand about the condition of the collections, lay out all possible treatment alternatives and their trade-offs and determine the unit costs for preserving different parts of the collections.

Task 8. DEFINE PRESERVATION SELECTION CRITERIA.

Develop a set of preservation classes and norms which, when completed, would allow systematic preservation selection decisions to be made about the various formats in the collection. Take into consideration the following factors: the collection development policy, the physical condition of the collection, the artifactual value, the level of use, and the intellectual content. Review the relationship between the collection development policy and the decision to replace an original with another format. Create decision trees to facilitate the choice of treatment options according to the condition of the item. Integrate regional and national preservation efforts into the Penn preservation model to minimize duplication of effort.

Task 9. DEVELOP A PROGRAM MANAGEMENT MODEL.

Use all the information generated in the preceding sections to:

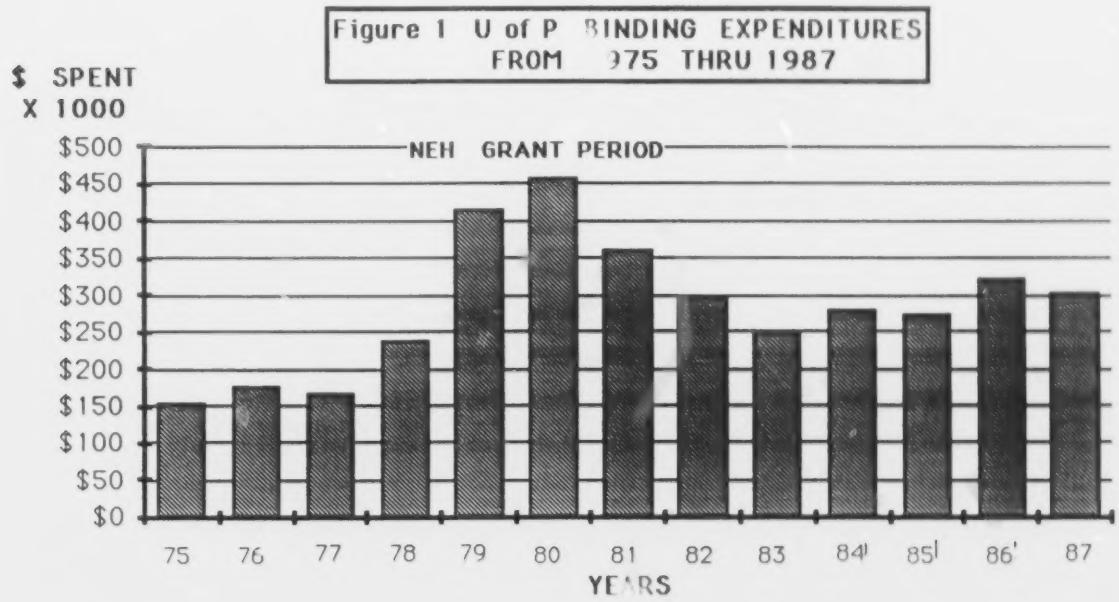
1. Organize a Preservation Office
2. Analyze the collection condition data
3. Determine the best approach to preserving the collections
4. Improve the housing and storage of the collections
5. Explore external service programs
6. Determine space needs for internal operations
7. Create guidelines for internal operations
8. Clarify budgetary needs and projections.

V. THE STATUS OF PRESERVATION AT PENN IN 1989

An understanding of where preservation activity at the Penn Library stood before the project started is important to judging how a similar project might work in another institution.

There was no formally organized preservation program at the Penn Library at the beginning of this project. The University Library consists of a central humanities and social sciences library (Van Pelt/Dietrich Library Center), eleven smaller departmental libraries, and a substantial special collections library. For many decades the Penn Library made a concerted effort to improve the physical quality of its collections by rebinding. The level of expenditure

for rebinding for thirteen recent years is shown below. An NEH grant for rebinding shows in the years 1979 through 1981.



The preservation program at the Penn Library in the last decade can be characterized by significant efforts in rebinding and small technically sound efforts in filming, phase-boxing, photocopying,and conservation of rare books as resources allowed. For the last ten years all preservation activity was done on an ad-hoc basis by two or three dedicated individuals with the assistance of a small processing group for the binding of books. It was apparent from the beginning of this project that key members of the senior library management wanted to have a formally organized preservation program and felt it was time for the Penn Library to move ahead in this area. The Library Director was willing to commit resources to the planning project, and a number of departmental librarians and staff members showed interest in the preservation program and attended the monthly seminars.

The operating budget for preservation activities in FY 1989 was about $390,000 and was heavily weighted toward the binding of library materials, with only modest support for other activities. Overall, the budget situation at the university remains very tight, and day-to-day preservation funds need to gain their base through a restructuring of the binding budget,

with annual increments that take into account a broader range of preservation activities. Funding for all major projects has had to be obtained from outside sources. Nevertheless, the preservation financial situation is a positive one because of the gradual build-up of a substantial budget base over the last ten years. Moreover, the potential is there for good support in incremental funding through a combination of endowment and incremental general funds. Penn has already broadened its book fund endowment efforts to include the purchase and preservation of library materials.

The ability to add staff positions at Penn is very limited, and although the Library does have a new budget line for a Preservation Administrator, additional positions will be very difficult to obtain in the future. It is unrealistic to plan for any substantial internal preservation operations that involve incremental in-house staff.

Space for new operations is also a major problem, and it would be difficult to find new facility space for preservation operations other than a departmental office and a modest sized staging area, though existing binding and finishing space is generous and will allow for some expansion.

VI. SPECIAL ASPECTS OF THE PLANNING PROCESS

A. The Consultant-Driven Planning Model

A quick review of the project organization chart (Figure 1 following page 4) shows that preservation consultants played key roles, along with top library staff, in managing the project on a daily basis. The directors of both regional service centers and key project staff members from these centers had responsibility for several of the principal collection tasks. In addition, the day-to-day project coordination was the full-time responsibility of a senior preservation consultant, the Project Director, who reported to a very busy Director of Technical Services. The Project Director relieved the Director of Technical Services of the details of the project but kept him informed of its progress, so that he could assist and take part where needed. The Project Director also gave considerable back-up support to other Penn Library managers who had primary planning task responsibilities. This relieved them of organizational details and made it possible for them to focus their limited project time on finishing their key task. Given the heavy workloads on the Penn Library management staff, this sharing of duties with the preservation consultant, whose only internal responsibility was to watch over the project, turned out to be critical in completing the various tasks. The presence of many other expert consultants on the project allowed for the input of technical information and helped the planning process along, since this expertise was not available internally.

The participation of the two local regional centers, The Conservation Center for Art and Historic Artifacts (CCAHA) and MAPS The MicrogrAphic Preservation Service, was invaluable in evaluating collection condition and housing and storage conditions.

B. Preservation selection

We used Ross W. Atkinson's paper "Selection for Preservation: A Materialistic Approach" (Library Resources & Technical Services, October/December, 1986, pp. 341-353.) as a point of departure for discussion. The framework provided by this paper allowed the planning team, headed by the Director of Collection Development, to create a document that, with some revision, would provide a basis for selection decisions in the preservation program.

The information developed by the Selection Task Planning Team followed a logical path that was easily understood by everyone involved (some team members had had no previous experience with the issue). This path is worth reproducing for other institutions to consider.

1. The collections were divided into three broad categories or classes, and guidelines were developed by which an item could be assigned to a specific class.

CLASS 1 materials need to be preserved primarily because of their high monetary and artifactual value and their rarity; this class consists largely of special or unique items, frequently rare books and manuscripts.

Collection development personnel determine preservation priorities for these materials on the basis of a combination of the monetary and artifactual value and rarity of individual items, treatment options, and the cost of treatment.

Preservation of Class 1 materials is a local, that is, an institution-based decision, but may involve coordination and cooperation with other institutions as appropriate.

CLASS 2 contains high-use materials in demonstrable demand for teaching and research purposes; these materials must be preserved locally in order to support the university's current and anticipated academic programs. Intensity of use is an important criterion for placing materials in this class, but the bibliographer's knowledge of curricular needs, user activity, and trends in the subject field will also be required. The overall goal is to ensure that the core materials needed by the Penn students and faculty in all fields are here and ready for in-house use.

Collections with the Conspectus level of 5 also fall into Class 2 (when not in Class 1). These materials, viewed item by item, often lack the high value and rarity of Class 1 materials. However, because they have been carefully selected, and are often unique or rare, they form sharply focused collections, have great value for research, and constitute major strengths of the Penn Library; their importance exceeds their value as individual items. Collection Development staff must identify and define Conspectus level 5 collections.

Preservation of Class 2 materials is determined largely by local needs and priorities but can involve coordination and cooperation with other institutions.

CLASS 3 consists of materials with low or medium use levels (or with no discernible use level) which may be of interest to future generations of students and scholars. The distinction between Classes 2 and 3 will frequently be unclear, but in general Class 3 materials will lack an immediate local clientele and may not need to be preserved locally at all. The goal of Class 3 preservation is to hand on representative collections of documentation for those who will come after us.

Class 3 materials lend themselves well to cooperative and coordinated preservation efforts with other institutions.

2. The preservation norms for each class were defined in terms of currently known approaches and technologies, while the need to keep abreast of developing technologies in the future was recognized.

These norms are based on generally accepted preservation options and will be adjusted in the future as new approaches emerge. For example, high-resolution filming and mass deacidification will be incorporated into the current program when appropriate.

Meanwhile Collection Development and Preservation staff will be following developments in the optical storage of text, image, and audio information, the mass strengthening of paper, and the reformatting of colored documents as potential technologies to be used in the future.

CLASS 1 PRESERVATION NORMS - Preservation of the original by single item conservation will be the goal for materials in this class needing treatment. Reformatting of Class 1 materials may be done either as part of a cooperative national microfilming project, or to protect the originals by providing working copies, or in response to user demand. Mass treatment techniques may be considered for specific collections.

CLASS 2 PRESERVATION NORMS - Since most materials in this class are heavily used locally, minor repair, binding, rebinding, mass deacidification, replacement, and reformatting will be the normal means of preservation. The production or procurement of a bound permanent paper copy is standard procedure for printed materials. A microform master may occasionally be needed, but microfilming alone, possibly excepting some serial titles, will not usually be adequate.

With Conspectus level 5 collections, the normal methods will be intermediate level conservation, phased conservation, rebinding, in-house repair, replacement, and photocopying, but microfilming will occasionally be required. Microfilming of Conspectus level 5 collections can be done as part of a cooperative national project, provided that a permanent bound hard copy remain in the collection.

CLASS 3 PRESERVATION NORMS - Rebinding, repair, replacement. mass deacidification, and reformatting will be the preferred means of preserving Class 3 items. Since this class of materials lends itself to cooperative efforts with other institutions reformatting to microform may prove to be especially useful.

3. A careful analysis was done to determine which types of formats were present in each preservation class, and a matrix-style table was constructed to show the results.

Each black dot in Table 1 indicates a need to consider a preservation decision path for materials in the particular combination of class and format. This information was reviewed again as decision trees were considered. It became apparent very quickly that the decision process was similar for many bound and single sheet formats, so they were grouped together for simplicity. These grouped formats are shown on the bottom of the table on the following page.

TABLE 1

LIBRARY FORMAT / PRESERVATION CLASS MATRIX

MATERIAL FORMAT	CLASS 1	CLASS 2	CLASS 3
BOUND VOLUMES (1)	•	•	•
SINGLE SHEET ITEMS (2)	•		
PAMPHLETS	•	•	•
MICROFORMS		•	•
PHOTOGRAPHIC MATERIAL(3)	•	•	
MOVIE FILM	•	•	
AUDIO TAPES	•	•	•
AUDIO RECORDS	•	•	•
AUDIO CD'S		•	
VIDEO TAPES	•	•	•

(1) INCLUDES FOLIOS, BOOKS, MUSIC SCORES, JOURNALS, AND CODEX MANUSCRIPTS

(2) INCLUDES POSTERS, MANUSCRIPTS, GRAPHICS, BROADSIDES, AND MAPS

(3) INCLUDES POSITIVES, NEGATIVES, AND TRANSPARENCIES

4. Initial preservation selection activities describing how materials enter the decision chain were written down.

General collection materials from Circulation that appear to be damaged will be put on a designated shelf in Circulation for review by Preservation staff. All materials needing attention will be taken to the Preservation Departments' staging area for further review; the others will be returned to the shelf.

Once the damaged materials reach the Preservation staging area, designated bibliographers will review them weekly to make class designations. Then designated selectors will review each item using the Class 2 and Class 3 preservation decision trees. Preservation staff will assist in the decision and implement any preservation procedure that is called for.

Items in Special Collections are kept there for review by Curatorial and Preservation staff prior to transfer to Preservation for treatment.

Materials in need of preservation are identified in a variety of ways listed below:

1. ***Circulation returns*** **:** Materials that are too damaged or to fragile to survive shelving or further circulation
2. ***Referrals from shelvers and fragments of books*** **:** Materials that are too damaged or too fragile to survive shelving, and loose pages or covers found on the sorting shelves
3. ***Referrals from Technical Services*** : Both new and gift materials in need of preservation attention before being cataloged
4. ***Retrieval for reader use in Special Collections*** :
5. ***Retrieval for exhibition purposes in Special Collections*** :
6. ***Systematic review of the collections*** **:** The intensity of this activity will depend on the availability of outside funds for specific projects; however, some level of activity can be sustained at modest levels each year with local funding.

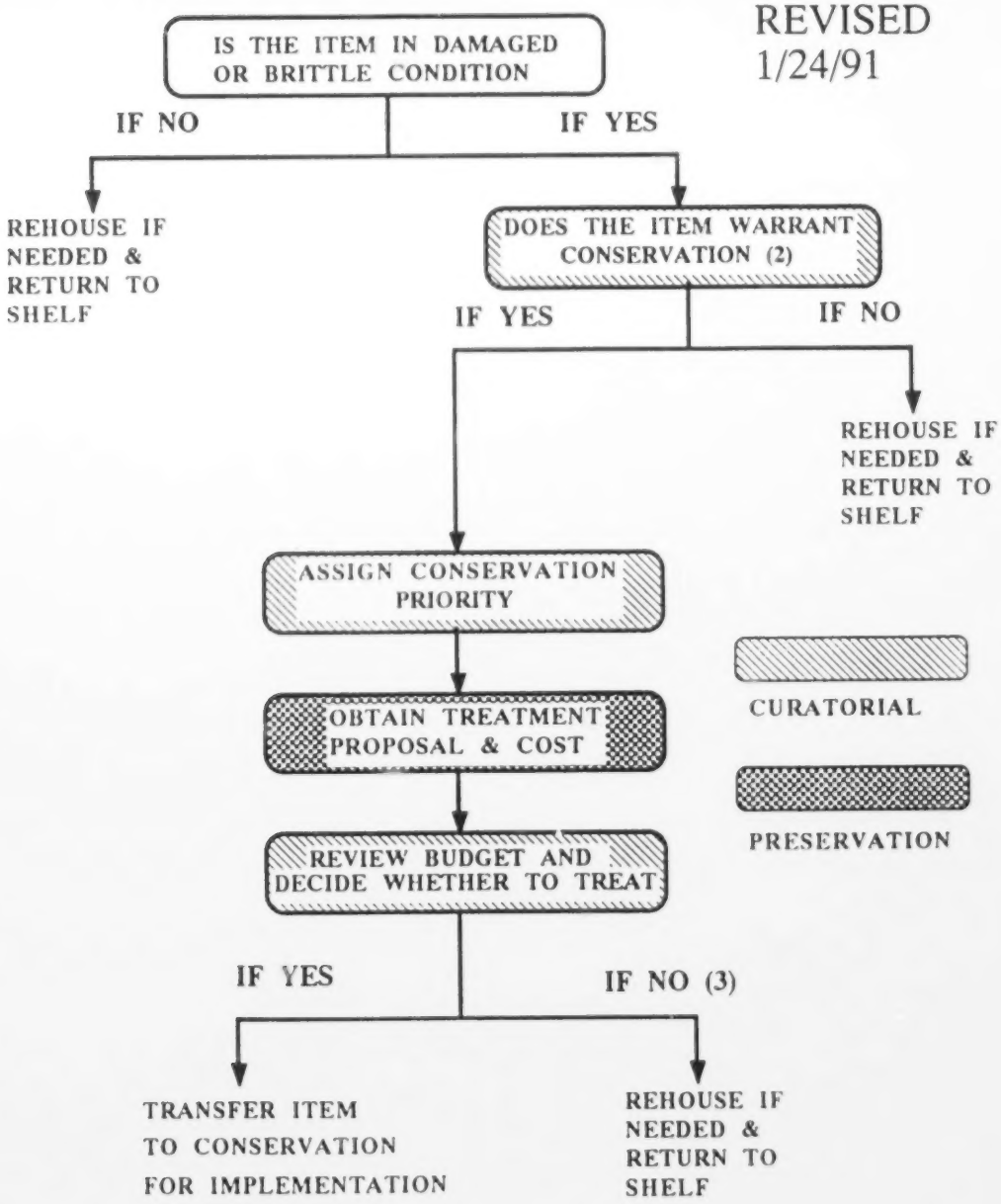
5. Decision trees were developed for each format group in a specific Class.

An example is given below for Class 1 single sheet items. Notice that the decision path is designed to guide the selection of items for expensive conservation treatments in a limited budget environment. An item must have a high conservation priority and fit within the yearly

PRESERVATION DECISION TREE

FORMAT : SINGLE SHEET ITEM (1)
CLASS : 1

DRAFT #6
REVISED
1/24/91


IS THE ITEM IN DAMAGED OR BRITTLE CONDITION
IF NO
IF YES
REHOUSE IF NEEDED & RETURN TO SHELF
DOES THE ITEM WARRANT CONSERVATION (2)
IF YES
IF NO
REHOUSE IF NEEDED & RETURN TO SHELF
ASSIGN CONSERVATION PRIORITY
OBTAIN TREATMENT PROPOSAL & COST
REVIEW BUDGET AND DECIDE WHETHER TO TREAT
IF YES
IF NO (3)
TRANSFER ITEM TO CONSERVATION FOR IMPLEMENTATION
REHOUSE IF NEEDED & RETURN TO SHELF
CURATORIAL
PRESERVATION

(1) INCLUDES POSTERS, MANUSCRIPTS, GRAPHICS, BROADSIDES AND MAPS

(2) AS MEASURED BY ITS RARITY, VALUE, SUBJECT, USAGE

(3) CODE FOR FUTURE CONSERVATION

budget to be sent for treatment. Correct housing is required for all items returning to the shelf.

C. Evaluation of the planning effort

The planning project at the Penn Library attempted to gather enough information to allow the Library to begin a formal program.

We found that it was feasible to do much of the original plan of work within the twelve-month period, and these accomplishments are listed below.

1. Completed statistical condition surveys of four complete library collections.
2. Completed condition surveys on nine major special collections.
3. Raised preservation awareness among the library staff and users.
4. Formulated preservation selection procedures and decision trees for nine material formats.
5. Reviewed housing and storage conditions for the collections.
6. Developed first level preservation plans for four regular library collections and estimated plans for two others.
7. Defined an organizational structure for a Preservation Department.
8. Defined external service needs.
9. Developed preservation cost estimates for six library collections.
10. Developed four-year budget projections for the program.

D. What did we learn?

1. While it was feasible to look at preservation needs and plans for some of the libraries and the special collections, it was clearly not feasible to put together an integrated preservation plan for all of the Penn Library's collections in a twelve-month time period.

2. The project budget should have included funds for paying student help for various repetitive tasks associated with estimating the condition of collections and the transcription of data.

3. More funds should have been budgeted for outside technical consultants for short term assistance with preservation decision trees for specialized non-print formats. The range of expertise needed here was more than the consulting team could muster from its own ranks.

4. A real issue was the need for released time for key library staff members with major project responsibilities. This should have been discussed before the project began and arrangements should have been made to free these persons to devote more time to the project.

VII. BUILDING THE EXTERNAL SERVICE SUPPORT STRUCTURE

The functional organization of the Penn Library's new Preservation Department is shown on the next page. The Post-Cataloguing section is currently in place and staffed with a supervisor and three and one/half FTE support positions to handle the preparation of books and journals for binding. The only new internal staff to be added will be the Preservation Administrator and several part-time assistants. Penn intends to work out contracted service arrangements for the staff, equipment, and space required to carry out the following preservation activities: rare item conservation, minor repair, reformatting, binding, and mass deacidification.

In the following sections the activities associated with the first attempts to work out service arrangements with The Conservation Center for Art and Historic Artifacts (CCAHA) and MAPS The MicrogrAphic Preservation Service are presented in considerable detail, in order to document the give-and-take of the discussions and to indicate the good ideas that were generated. The level of detail reported on discussions with the other service contractors is lower because the arrangements discussed were more conventional in nature.

A. Conservation and Minor Repair Services

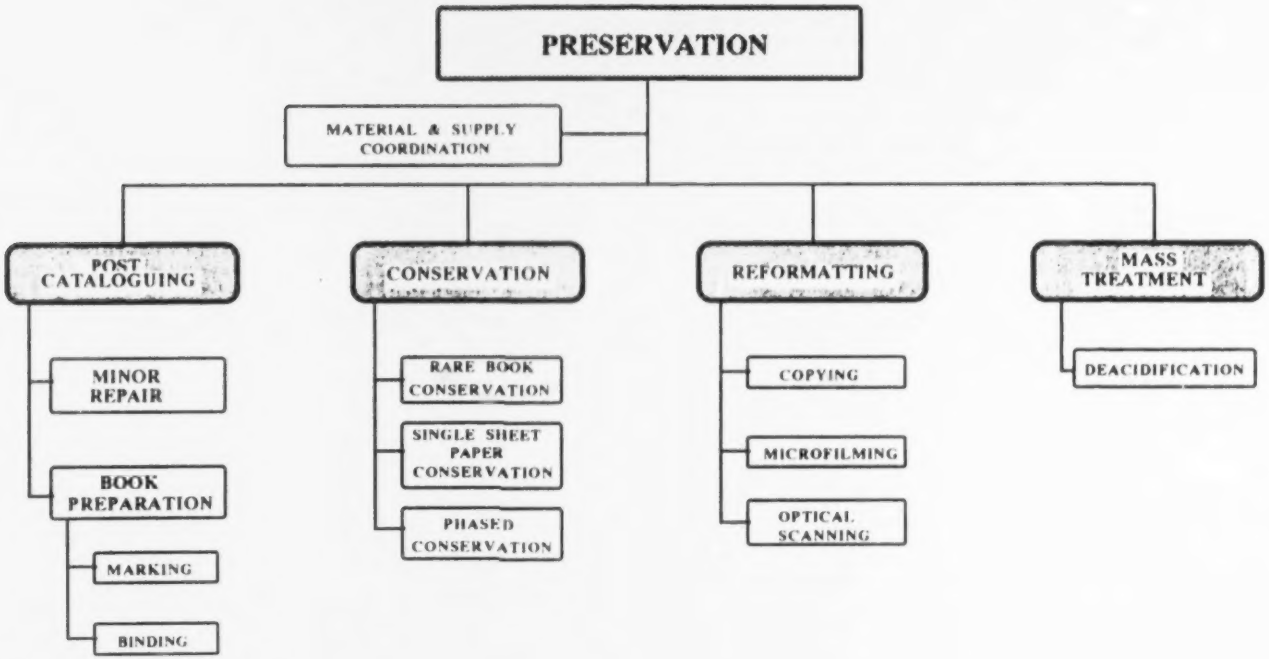
The Penn Library sent CCAHA a list of services that it wanted to buy. Each item on the list was discussed at a meeting with CCAHA, and they later responded. Notice that at this point the Penn Library wanted to consider the possibility of doing minor repairs on site with CCAHA technicians (see items 5, 6, &, 7). The list of needs is given below with supporting information in italics as needed.

1. Major single-item conservation treatment of rare materials at CCAHA.
(This service had already been done for the last five years)

2. Minor repair of regular books and documents at Penn or at CCAHA.

3. Intermediate binding of reference works at CCAHA.

PENN LIBRARIES PRESERVATION DEPARTMENT
FUNCTIONAL ORGANIZATION CHART



4. Design and construction of custom boxes at CCAHA.

5. Training of technicians to do minor repairs on books and documents either at CCAHA or at Penn.

6. Design and equipping of mobile repair carts and list of materials needed.

7. Technical review of minor review of minor repair unit operation after a period of one year.

8. Liaison conservator assigned to Penn to be on site weekly by the day or half-day. *(For direct assistance with administration of the new Conservation Section)*

9. Secure transport of rare materials to and from Penn. *(Penn staff have had to hand carry objects to the center and back.)*

10. Preparation of rare materials for exhibition.

11. Evaluation of exhibition spaces and cases for environmental conditions.

12. Condition surveys of special collections as needed.

13. Preliminary estimates of treatment costs at Penn. *(to support selection process of rare materials for treatment)*

CCAHA responded to the Penn Library's list of needs by a letter which is reproduced below. In addition to discussing the above list, it suggested only a single approach to what Penn Libraries wanted to do with minor repairs. Notice in the second paragraph of the letter mention of potential services to be offered and a commitment to start them in the fall of 1991. These are new ventures for the regional center.

CCAHA did not see the Penn Library's needs 5, 6, &7 as viable economic alternatives for them and chose to support the idea of minor repair at their location with pickup and delivery of all materials from the library. The reaction at the Penn Library was positive, and after thinking about the difficulties of locating space for this operation in-house, we decided to try out the minor repair operation that the center was proposing. At this point, it appeared that the Penn Library's single-item conservation needs could be met by contracting with

CONSERVATION CENTER | *for Art and Historic Artifacts*

February 21, 1991

H. Carton Rogers
University of Pennsylvania
34th at Walnut Streets
Philadelphia, PA 19100

Dear Carton:

To our conversation of Tuesday, January 29, 1991, the Conservation Center for Art and Historic Artifacts currently provides or could provide many of the services included in your list of needed services. As we discussed, in the area of treatment, we currently undertake major treatment of rare materials, design and construct custom boxes (either from measurements or with the books in-house), prepare rare materials for exhibition, complete condition surveys for special collections, and provide estimates of treatment costs. We could undertake any of these activities immediately for the University of Pennsylvania libraries.

Attached is a draft of Conservation Center for Art and Historic Artifacts library services and their costs. Items on the list under I. Conservation Treatment of Rare Materials and II. Conservation Liaison are services currently available. Items on the list under III. Circulating Collections Services and IV. Intermediate Binding are potential services that CCAHA could provide if the need exists. If Penn wishes to include these services in their 1991-92 budget, CCAHA could begin delivery in September on all. The prices that are listed are valid for the 1991 calendar year, but will be revised in 1992.

Sincerely yours,

Linda V. Ellsworth
Executive Director

CCAHA - Library Services

I Conservation Treatment of Rare Materials

A. Hourly Rates: $ /hr conservators (Book,or Paper)
$ /hr technician

B. Average Costs of Conservation Treatment

1. Books

a) Repairs to textblocks, and covers - range from $ - $ /volume, average $ /volume

b) Full treatment - range from $ -$ /volume, average $

2. Flat paper

a) Manuscripts - $ /page average cost

b) Maps, posters, broadsides

1) Repair - range from $ -$., average $ /item.

2) Full treatment - range $ and up, average $ /item.

3. Rare book boxes - $ /box to 14", $ /box 14" to 18"; custom housing ranges in price from $ and up.

C. Description of Service:

1) Condition Reports, pretreatment estimates and final by conservation liaison at a rate of $ /day @

2) All work performed under the supervision of professional conservator.

3) All work performed at CCAHA facilities.

4) Before and after documentation photography supplied to client.

5) Final report supplied for every item.

6) Special materials may be additional.

II. Conservation Liaison

A. Rates: currently $ /day

B. Description of Services:

1) Planning

a) Survey - to identify treatment problems define projects and assist in prioritized collection needs assessments.
b) Treatment - plan treatment projects; specify needs though condition reports; define projects, design customized services (boxing, treatment).

c) Grants - cost estimates for projects. Assist in proposal and budget preparation.

2) Conservation Standards for University of Pennsylvania:

a) Exhibition - assess items, define mounting systems.

b) Loan - document condition of loan items.

c) Supplies and Services - advise on in-house materials purchases; and contract services.

d) Treatment Assessment - advise on planning and design.

3) Special Projects

a) Assist in disaster planning

b) Advise on building and maintenance issues

c) Seek specialized advice (for instance, object conservation, pest control, etc.)

d) Assist in the establishment of on updating in-house policies concerning handling, loan agreements, exhibit policy, staff training etc.

C. Qualifications of CCAHA:

1) Staff of ten professional conservators; expertise covers a wide spectrum of materials, including: books, paper, leather, parchment, works of art on paper, wallpaper, architectural drawings, etc.

2) In-house Preservation Services Office, including professional librarian on staff, who advises institutions full-time on preservation issues and planning.

3) As one of the largest treatment facilities in the country CCAHA takes a leading role in the conservation field.

III. Circulating Collection Services

A. Book Repair

1. Minimal Text or cover repair - $ /vol.

a) Minimal text repair: 1) heat set Japanese paper tissue mending of up to five pages, or 2) tipping-in a loose section or pages; or 3) inserting photocopy replacement pages.

b) Cover Repair: 1) Reinforce loose hinge; or 2) Reattach loose spine, or 3) Attach new spine, or 4) Other minor repairs to the cover.

c) Extra charges: 1) extra mending $ /page; 2) map pocket: $; 3) new label $; 4) polyester film wrapper $

2. Text block/cover repair - $ /vol.

a) Textblock/Cover Repair: 1) cloth reback-remove old spine linings, clean spine, hand sew new end sheets, reline spine, repair original cover. 2) Recase-remove old spine linings, clean spine, hand sew new endsheets, reline spine, recover with new cloth cover, paper label.

b) In addition to extra charges above: 1) sewing repair: $; 2) hand resewing: $; 3) adhesive rebinding: $

3. Advantages of Service

a) Minimal library processing overhead - books identified through circulation - checked-out through circulation to repair and rechecked in on return.

b) Routine pickup and delivery at no additional charge.

c) Faster turnaround than commercial library binding and immediate access to materials can be provided through CCAHA.

d) No trimming of text, spine or margins.

e) Retains original format.

f) All treatments performed at CCAHA with professional conservator supervision and specification.

B. Pamphlet Binding

1. Cost - $ /volume up to 18 inches in height

2. Specification

a) single section pamphlets only

b) hand sewn into Archival Products binders

c) paper labels on the front cover

d) No trimming of text spine or margins

3. Can be picked up and delivered with materials for repair. Same turnaround on books.

C. Simple Enclosures:

1. Phase boxes $ /box up to 12 inches in height; add $ for each two inches over 12"

2. Wrapper boxes $ /box up to 14 inches

3. Specifications

a) Phase box - 60 pt lig-free board, button-thread ties, made to size. Paper label.

b) Wrapper box - 20 pt acid-free board, self closing, Paper label.

c) Boxes made to size of volume.

4. Advantages

a) Boxed items can be labeled "fragile does not circulate."

b) Enclosures can be made to size without sending volume out of library.

c) CCAHA can measure on site for boxing at an additional charge.

d) boxes can be ordered and delivered with repair items, with same turnaround on books.

IV Intermediate Binding - Reference Material

A. Cost:

up to 14 inches - $ /volume

14" to 18" - $ /volume

10" to 24" - $ /volume

B. Specifications

1. Spines cleaned and relined by hand.

2. Spine lined with unbleached Irish linen and tyvek

3. Acid-free, cloth-jointed endsheets

4. Split board attachment of binding boards, hand covering in-board binding

5. Quarter binding of natural linen on spine and "elephant hide" paper sides.

6. Resewing of textblock by hand at extra cost available. Possibility of Smyth sewing through the fold.

C. Advantages:

1. Superior strength and durability; split board binding is the strongest most durable style of hand binding, Because this style requires hand covering, it cannot be produced by machine bindery.

2. Laminated cover boards have superior resistance to flexing and hardness in comparison typical single ply machine binder covers.

3. The combination of Irish linen, tyvek, and cloth jointed endpapers provides superior strength at the hinges of the cover and caps where most damage occurs.

4. Natural linen on the spine is durable and attractive. Elephant hide paper is extremely tough and resistant to scuffing.

5. No trimming of text spine or margins.

CCAHA and that the Center was willing to consider expanding the scope of their services to meet those needs.

Several other meetings were held with CCAHA to talk about contracting concerns and how the liaison conservator's time would be charged. These sessions generated some interesting ideas about the best contracting approach for the Center and how it might structure its charges for liaison conservator assistance on-site.

For example, when Penn suggested that paying for an on-site conservator by the day at a rate of about $400 per day might inhibit the use of this person, the Center suggested that it would consider developing an hourly rate that could be used to charge conservator time to on-site projects. They also suggested that it would be very helpful to them if the Penn Library would allocate funds to standing purchase orders at the beginning of Penn's fiscal year for each major project, i.e., conservation of special collections, minor repairs, and program administration. Staff time for single-item treatment, minor repairs, and preservation program administration could then be billed to these purchase orders as the work was done. Penn Library management thought that the purchase order idea was possible and that the hourly charge for on-site administration was a better approach. Although none of these ideas have been reduced to actual practice, they do represent a good start in building an expanded and mutually beneficial working relationship between the Penn Libraries and CCAHA.

What did we learn from this interaction between the Penn Library and CCAHA? First and foremost, we learned that building business relationships takes a lot of work, understanding, and a willingness on the part of both organizations to be flexible and take some risks for the promise of the future. We also learned that economics will play a very important role in the relationship. Even though CCAHA and MAPS are not-for-profit organizations, they are still businesses that need to sell a product of value to their customer in order to recover costs to pay for their operations. For example, we saw that CCAHA would much rather tool-up to do minor repair of Penn Library books than train Penn staff to do it internally, because the former will generate income for the Center not only from the Penn Library but also from other libraries in the region. The Penn Library would get the benefit of the repaired book picked up from and delivered to its doorstep and would avoid the cost of people, space, and equipment to do the job in-house -- a fair trade by most measures at the cost quoted, but something that would have been difficult to make happen if the Penn Library had stuck fast to its original plan of an in-house repair operation or if CCAHA had not been willing to work out the details of delivery. A little flexibility and understanding went a long way in this instance.

Another economic issue highlights the advantages of flexible contracting procedures. CCAHA needs its customers to contract in advance for work to be done in any given fiscal year. This allows the Center to schedule staff to do the work, to better estimate their budget for that year, even out their cash flow and allow them to meet recurring expenses without having to borrow to make up for cash shortages. At the same time, this approach allows the library-customer to allocate its resources early in the fiscal year and maintain budgetary control over the entire project. The Preservation Administrator can then measure preservation progress by knowing what tasks or items are being worked on and scheduled for completion that year. Both organizations gain something they need from the arrangement.

B. Reformatting Services

The approach with MAPS was similar to that with CCAHA; The list of eleven reformatting needs sent to MAPS by Penn is shown below. Some of these explore new technologies that were discussed and incorporated into the preservation norms above.

1. High-resolution 35 mm microfilming for all projects.

2. Preservation microfilming for regular books and documents.

3. Preservation microfilming of rare books and documents with proper handling and short turn-around times.

4. Preservation photocopying of text that is also being microfilmed.

5. Secure transportation of materials to and from the Penn Library.

6. Quality control on finished films at a level to be determined.

7. Storage of master films and duplication of specific films on demand.

8. Preparation of materials for filming i.e. collation, targets, new bibliographic records.

9. Preservation color microfilming.

10. Dedicated camera time.

11. Compact digital disc copy of text undergoing preservation filming.

MAPS' response is reproduced below. MAPS was responsive to Penn's needs and was willing to consider doing more that just providing the filming of the brittle pages. In fact, other customers had already asked MAPS to consider the feasibility of doing collation and bibliographic preparation.

Several points in the MAPS proposal letter warrant discussion. The Penn Library wants to go to high-resolution cameras for all its future microfilming, and it appears possible for MAPS to offer this service if scheduling of projects can be worked out. MAPS was willing to give the Penn Library exclusive long-term use of a new high -resolution camera for a one-time payment of $48,000. This would be a very good arrangement for an institution interested in both upgrading its current camera capability and moving its internal filming operation to a regional center. Penn would also like to buy a photocopy and, in the future, an optical disk of volumes that are being filmed. MAPS indicated their intent to offer this service in the future but could not indicate a time when this would be available. Until such time as MAPS can do both tasks at the same location, the Penn Library would have to seek another vendor to do the preservation photocopying of volumes that warrant the retention of a hard copy in addition to the film version.

An important issue with the Penn Library is the collation and bibliographic preparation of materials that are going to be microfilmed, because of the lack of internal personnel to assign to this task. MAPS has indicated their willingness to consider doing a variety of tasks under contract which will make it possible for the Penn Library to seriously consider doing large filming projects.

C. Mass Treatment Services

Meetings with two mass deacidification vendors took place, and each made a presentation about their process. Subsequent discussions focused on trial treatment programs and materials-processing services offered. This technology is so new to the library field that no list of specific needs was generated; however, it was clear that the Penn Library might need some help with the handling, packing, and shipping of books in a real production situation. The vendors indicated that they would consider supplying personnel to assist with book handling.

D. Photocopying Services

A meeting took place with one vendor who offered high quality preservation photocopying of brittle material and a quality, bound copy of the new text pages. This vendor

MAPS
MID-ATLANTIC PRESERVATION SERVICE
NINE S. COMMERCE WAY
BETHLEHEM, PA 18017
(215) 758-8700

February 13, 1991

Mr. Peter G. Sparks
69 Station Avenue
Devon, Pennsylvania 19333

Dear Peter:

We were very pleased to have the opportunity to discuss the University of Pennsylvania's preservation reformatting needs and the ways MAPS may be able to help meet them. I trust that Dan, Carton, and Dennis saw what they needed to see and will not hesitate to get in touch with either Eileen or me with questions that may arise in the process of absorbing all that we discussed.

The purpose of the balance of this letter is to respond to the eleven points of discussion that you prepared prior to the meeting yesterday. In essence, I will be documenting what we discussed and underscoring MAPS' interest in working with Penn.

High Resolution Microfilming

Penn would like its material filmed on the H&K cameras because of the substantially higher resolution of the end product. If Penn were to make that demand today, MAPS could not comply simply because the one H&K we do have in operation is fully committed. However, we have five more due for delivery this year; a sixth also due for delivery is a large format camera which may have limited utility for Penn projects. However, by June 1991 MAPS will have the first two additional H&Ks up and running.

Were Penn interested in "purchasing" the exclusive use of one or more H&K cameras, a one-time payment of $48,000 per camera would commit these cameras to Penn for as long as the two organizations exist. MAPS could only use the Penn cameras for non-Penn work if Penn were not able to keep them supplied with materials to film. Clearly, the pricing for Penn projects would be negotiated annually, but would never rise above the current high volume MAPS pricing. The option to purchase permanent access to cameras can not be offered indefinitely. Once as much as

a third to half of the MAPS H&K camera inventory is so committed, it is unlikely that this offer will be continued.

By the end of 1991, MAPS will have a total of seven H&Ks in operation with another six hopefully on order for 1992 delivery. It is our intent to convert all of our Kodak MRD-2 cameras to the H&K or an equivalent camera. It is our ultimate intent to offer nothing but very high resolution preservation microfilming. We would be very pleased to develop a working relationship with Penn that guaranteed the production of high resolution preservation microfilming products.

Preservation Microfilming for Regular Books and Documents

Aside from the fact that we find few "regular" books in any collection, we understand that the intent here is to get reliable service from a preservation microfilming vendor. This is the life blood of MAPS and hence we will be very pleased to work out a schedule with Penn that is consistent with the amount of filming they can afford to do. We mentioned the figure of 10,000 volumes as the capacity of a camera-year. In fact, the capacity is in the 5,000 volume range. (15 hours of filming per day at 250 frames per hour = 3,750 frames times five days per week = 18,750 frames per week times 50 weeks = 937,500 frames per year times 85% = 797,000 frames divided by 160 frames per volume = 4,981 volumes.) However, if Penn has aspirations of filming at the 10,000 volume per year level, MAPS would be pleased to commit sufficient camera resources in order to accomplish that goal. We only ask that once such a commitment seems to be likely that MAPS be informed so that appropriate camera resources can be reserved. It is likely that we would develop a weekly pickup and delivery schedule and a filming scheduling of approximately six weeks per batch. Each batch would be about the size of one week of filming or 100 volumes per camera. The start up period should be sufficiently flexible to allow glitches on either end of the pipeline, but once resolved, there should be a fairly dependable stream of completed work arriving at Penn.

Preservation Microfilming of Rare Books and Documents with Proper Handling and Short Turn Around Time

We suspect that part of this requirement, the short turn around time particularly, is the result of current processing. At the moment, we get a call from Penn saying they have some material that needs to be filmed. Recently these batches of material have been relatively small. Our current work load is such that our cameras are scheduled for three months in advance. Hence, in order to get to the Penn material we have to find a slot on a camera and that can take some time if projects are moving along more or less smoothly. However, we would like to suggest a strategy that works for another Institution that has a limited amount of material to be filmed. We schedule a monthly camera slot for the Institution and they inform

us a week in advance if they will need it or not. We would suggest the same sort of approach with the Penn Special Collections Library. The penalty that has to be paid for this approach is that since most shipments are small, there is a small project setup fee in order to recover the costs of setting up the project for filming. If this seems like a satisfactory way to proceed, we could get something started immediately on this one, or at least within the next month or so.

Preservation Photocopying of Text that is being Microfilmed

MAPS has committed itself to the philosophy that microfilm, at least from what we know now, provides the firmest base for preservation of print on paper materials. Further, there are some materials that are so frequently used that microfilm is an inconvenient, even uncomfortable medium for end users. Hence, we hope to have in place at some point in the future a system that will take the second generation print master, scan it and produce hard copy output. That system exists for fiche and 16mm film but not yet for 35mm film. We are seeking support for the creation of such a system for MAPS' use. If in the context of seeking support for Penn preservation needs there is a possibility for a joint proposal to some entity, MAPS would be pleased to join in such a proposal. In fact, the scanning part of the system could be used not only to prepare data for printing, but also for various digital products from film. This approach means that an item is subject to reformatting procedures only once yet a variety of products would be possible, all stemming from the high resolution microfilm foundation.

In short, MAPS can not offer such a service at this time. We are interested in adding such a service, but will have to have foundation or external support to do so.

Secure Transportation of Materials to and from Penn

As indicated above, MAPS would suggest a weekly pick up and delivery using the MAPS van, fully covered by MAPS transportation policy. Additional insurance is available at $2 per $1,000 of valuation per batch, but Penn would have to declare a value in writing in advance of the pick up or shipment. If using a transport service other than the MAPS van, Penn would have to take whatever minimum insurance the carrier offered and the policy would cover the rest of the declared value. The cost for weekly pickup and delivery will be $3,000 per year if paid in advance, or $3,380 if paid as incurred. Clearly, the weekly pickup would include both "regular" collection materials and Special Collection materials.

Quality Control of Finished Films

MAPS has been organized around the RLG Specifications for Preservation Microfilming and intends to continue to adhere to those standards. Penn can specify whatever level of quality control that it finds appropriate, but MAPS would recommend sticking with the RLG specs. They are as rigorous as any fully articulated set of quality assurance specifications. MAPS' current experience is that resolution, density, and Quality Index measures are rarely faulted by clients and we seldom are faulted for scratches or faulty film condition. The challenge we are facing now is improving our 100% inspection procedures in order to make certain that all pages have been captured. Our plan is to set up a separate unit designed to do nothing but 100% inspection. Clearly, no matter what vendor Penn uses, it will want to exert some measure of quality assurance over the film it receives from the vendor. We would want our film inspected to alert us to any problems that may creep into our processes.

Storage of Preservation Masters and Duplication on Demand

MAPS provides no storage for preservation or archive masters and recommends that Penn establish a relationship with one of the large organizations that provide that service, Iron Mountain or National Underground Storage.

MAPS does provide storage of second generation or print masters in a specially designed storage vault, complete with environmental systems that keep the humidity at 35% plus or minus 3% and at 65° Fahrenheit plus or minus 2° F. The vault is also equipped with a fire suppression system, smoke detection system, motion detection system, heat rise detectors, air filtration systems -- all monitored remotely 24 hours per day.

The cost for storage is $1 per reel per year for the first 200 reels, $.75 per reel for the second 200 reels, and $.25 per reel for all additional reels. A full year's storage charges are levied for all film stored through August in a given year. Storage charges are billed at the beginning of each year in January. Any film produced at MAPS is stored for the balance of the calendar year cost free, regardless of when stored. However, the film stored in the vault need not have been produced by MAPS. In addition, duplication services are provided at preferential rates for all reels stored in the vault. The current price to duplicate a reel of client supplied film is $18.50. If the reel is stored in the MAPS vault, the cost for duplication is $16.50. Institutions storing the most material with us seem to average a 7% annual duplication rate which can translate into sufficient duplication savings to pay the storage charges.

Regardless of what other decisions Penn might make with regard to preservation reformatting services and the vendor selected, MAPS would very much like to

provide this service to Penn as soon as possible in order to get the print masters that Penn owns into controlled environmental conditions.

Preparation of Materials for Filming including Collation, Targets, New Bibliographic Records, Etc.

As discussed yesterday, MAPS is proposing to do these sorts of things for the National Library of Medicine. In fact, we supplied to the Penn visitors draft copies of flow charts indicating the sort of work that is involved and the number of steps that have to be taken. It is a complex set of tasks and Penn will have to decide at what level it will participate in the process.

MAPS would be willing to develop a contract to do any or all of the following in support of the Penn preservation reformatting effort:

1. Initial bibliographic searching, either limited to online databases or including paper sources.

2. Physical evaluation of material (can it stand filming?; does it need to be disbound? etc.)

3. Collation and targeting (however, Penn would have to take responsibility for acquiring material to complete volumes intended for filming.)

4. Prepare targets including printout bibliographic targets from RLIN, eye legible targets and other item specific targets.

5. Post filming bibliographic updates.

Penn personnel will have to be involved in any exception decisions unless there are relatively clear rules of decision that Penn would be willing to entrust to MAPS. Even with a relatively complete set of such rules, there will be decisions that MAPS would want to share with Penn or, even better, leave to Penn entirely.

Preservation Color Microfilming

At this time, there is no such animal. There are no standards for preservation color filming. But, MAPS is at work on some testing of color microfilming using the only film capable of long lived color fidelity, Cibachrome. Color will be an extraordinarily expensive process with the film costing almost eight times more than black and white microfilm. MAPS will be pleased to keep Penn apprised of progress in the color microfilm arena. The Image Permanence Institute is testing

Cibachrome and there is a beginning effort to define what preservation standards can be applied to color microfilming.

Dedicated Camera Time

See the section on preservation microfilming for regular books and documents. A proposal is made there to provide dedicated camera resources to Penn.

Compact Digital Disc Copy of Text Undergoing Preservation Filming

Comments made above in the discussion of preservation photocopying are appropriate here as well. MAPS intends to use the microfilm base for the creation of a number of end user products including a variety of the disc formats. The means for generating the digital signals from high quality film is already available at modest cost.

Peter, I trust the full text of this letter will be shared with the Penn visitors. We extend, once again, an invitation for a return visit to discuss any of the topics noted above (or others). MAPS was established to serve the particular needs of the research library community specifically and we look forward to fulfilling that mission in the context of Penn's evolving preservation program. Please let us know if we can be helpful as the program continues to mature.

Sincerely,

C. Lee Jones
President

was located too far from Penn to pick up materials themselves. Therefore, Penn would have to send materials through conventional means. This vendor would expect that any collation, replacement of missing pages, as well as any bibliographic work, would be done by Penn Library staff prior to the volume being sent for copying.

E. Library Binding Services

It was not possible in the last two months of this project to schedule a meeting with the company that did the Penn Library's binding. Since this service was already in place and internally staffed for material preparation and processing, it was decided to simply continue the service as it was being contracted for until the binding program could be reviewed during the coming year.

VIII. A Working Model

A working model for a service-contracted preservation program can be suggested for the Penn Library program. It may need some refinements or adjustments for other institutions in different locations. In practice, a contractor-based program will involve different relationships with a number of service providers. The nature of each relationship will depend on the type of service to be supplied to the library, the geographic location of the contractor, and the degree to which the library involves the professional staff of the contractor as part of the departmental preservation team. Three possible types of service relationships are described below with a consideration of how the Penn Library's program might be structured around them.

Type A Relationship - Service contractors' professional staff members are considered to be part of the library's departmental preservation team. Good personal relations are essential between the two organizations. Daily travel and communication between organizations is also a very important factor in this relationship, so it is essential that the service contractor be located in the same city or within easy driving distance of the library. The contractor's professional staff members will be at the library on a daily basis doing collection preservation functions and preservation planning, etc. They will work closely with the library's Preservation Administrator, who will provide general supervision as well as contract monitoring. Contractor support staff will also do material processing at the library's location and provide transport of materials to and from the library for treatment at their location. Procurement of basic support services will be on a sole-source-justified basis for one- or two-year periods or longer with agreements on services to be provided and their costs.

Type B Relationship - The service contractor's professional staff members will not normally be involved in on-site collection preservation functions but can help with program planning. They may be considered as part of the library's departmental preservation team but are much less involved than in the Type A relationship. Site visits and communication continue to be important, but the need for daily on-site contractor staff will be infrequent. The service contractor will not need to be in the same city as the library being served, but a location in the same or neighboring state would be useful to facilitate trips to and from the library. Contractor support staff will do material processing and handling at both locations as needed and provide transport of materials to and from the library for treatment at the contractor's location. The library's Preservation Administrator will be the contract monitor. The service organization can be a sole-source vendor, but if need be, the contract could be bid to others prior to selection. Contracting can either be by the year or by the project, since reformatting and mass deacidification projects are large in scope.

Type C Relationship - The service vendor's staff is not considered part of the library's preservation team, and the vendor is not required to have support staff on location to assist with material processing or handling. The vendor's location will not be important to doing the work, but they should be in the United States. All library materials will be selected for treatment by library staff members and shipped to and from the contractor's location. Communication with the contractor in this relationship is important, but site visits will be once a year at most, for vendors at a great distance no visits will be made. The Preservation Adminisitrator will be the contract monitor. Procurement will be through yearly contracts, bid on by two or more vendors as appropriate.

How would this work at the Penn Library?

The Penn Library has several challenges to overcome in building its preservation program. Even with a Preservation Administrator in place, additional staff, space, and equipment will not be readily available in the foreseeable future. Thus the Library will need professional and technical contractor staff to work with its small preservation department, and it will need space and equipment with which to accomplish various material treatments. The Penn Library has a reasonable baseline budget for supporting preservation activities and good potential to raise outside funds to do major projects. However, these funds could vary considerably from year to year and are not easily allocated against long-term internal commitments for staff and equipment. In order to get the job done in this fiscal environment, it will need to fashion special contractual agreements with service contractors to provide staff support, space, and equipment to

do the work at a reasonable cost. How would this work for the Penn Library, given its collection needs, local preservation resources, and current program strengths?

Given the great strength and the preservation needs of Penn's Special Collections, coupled with a major conservation regional center (CCAHA) located within easy walking distance and willing to offer a complete range of services, it would make sense to establish a Type A Relationship with this center. The level of professional staff available from CCAHA can give the Preservation Administrator at Penn total support for managing the Conservation Section and for developing and carrying out a long-term preservation plan for Special Collections. Contracted services would include single-item conservation, minor repair, intermediate binding, preparation for exhibition, transportation of materials to and from the library, and liaison conservator advice.

It does not make practical sense to consider other regional conservation centers for Special Collections work. For other libraries, however, lacking a nearby regional conservation center, two regional conservation centers might vie to provide what is needed in a Type A relationship. One might expect them to come out more or less the same on cost and different on what services they are willing to offer. Selection may very well hinge on the latter.

The level of reformatting needed at Penn is very large, and a multi- service external organization will be needed to get the job done. This service organization could have either a Type A or a Type B relationship with the Penn Library, depending on how much staff support the library needs to plan and operate their reformatting program. The processing of brittle materials for reformatting is a heavy workload for a small department, and most likely the filming contractor would need to supply on- and off-site processing services as well as filming. The use of senior professional contractor staff is a possibility but not as strong a need as with single-object conservation.

The relationships with mass deacidification vendors will probably be of Type B, because contractor staff support will be needed to move and pack books for shipping and possibly for similar functions as they come back into the library. If these functions can be handled by library staff then a Type C relationship would be appropriate. Contractors for library binding and photocopying will have standard Type C relationships with the Penn Library, because internal staff are already in place to process books for these activities.

IX. TOWARD A STRATEGIC PRESERVATION PLAN

Strategic planning is the identification of those objectives that will best realize an organization's overall goals. Such planning usually involves four related and sometimes overlapping processes:

1) **research and analysis** (in which several varieties of information and data are gathered and analyzed and certain preliminary factual questions are answered),

2) **goal-setting** (in which those responsible for the organization refine, update, revise or reaffirm, and express its primary goals),

3) **strategic planning** (in which certain norms and objectives are agreed upon as being those which will best interpret and accomplish the set goals), and

4) **operational planning** (in which a specific series of concrete actions is projected by which each of the strategic objectives will actually be carried out).

In the Penn Library's project the "**research and analysis**" phase of the planning focused on several areas--the array of preservation technologies presently available to preserve the collections, the service organizations which could apply these technologies to the collections, the current condition and needs of the Penn Library's collections, and the status of the buildings and storage systems housing the collections. In evaluating the operational status of preservation technologies, the planning team called on preservation consultants to assist in the review of various developing technologies. The time, cost, and importance of this step should not be underestimated, since information about the potential success of new technologies is vital to understanding the options and trade-offs among several preservation choices.

This information on available technologies was used to build a group of preservation norms for the collections which would become guideposts in the operational phase of the program. Work in the area of establishing collection needs proceeded throughout the year simultaneously with other aspects of the planning process, because the size and diverse nature of the University's holdings made in-depth condition surveying a lengthy process. The analysis of these data led to defining preservation needs and preliminary plans for individual library collections which in turn would become elements in the overall strategic plan for the entire collection.

Goal-setting took place at the start of this planning project. The University's senior library managers agreed on the goal of formulating and initiating a preservation program for the Penn Library's collections. This program was to be comprehensive, taking into account the needs of all twelve libraries and Special Collections. It was to be a balanced program, so that no collection's needs would be ignored. The directors recognized that the program must be flexible, since preservation technologies and providers are in a state of rapid, often

competing development, and that pilot programs would be useful in ascertaining the appropriateness of certain technologies for the Library's collections. Finally, they agreed that the new management model utilizing consultant expertise, a small in-house staff, and outside service organizations was worth exploring and developing.

Strategic planning to accomplish this goal of creating a flexible, comprehensive preservation plan for the Penn Library's collections took into account three possible levels of preservation activity--national, regional, and local. It became clear that certain forms of preservation, namely the reformatting of brittle materials, could in many cases be accomplished best by having the University of Pennsylvania support and participate in a nationally coordinated reformatting effort. The task of preserving brittle library materials is so large and, in most cases, so overwhelming for any institution's budget that cooperative reformatting programs become the only feasible way to accomplish the saving of information on brittle paper. *(The laboratory data from condition surveys of four historic library collections at Penn and the estimated condition of two others gave such strong support to this approach that it is worth mentioning to underscore its importance. The estimated size of the brittle paper problem at Penn is 775,000 volumes and a conservative estimate of the cost of reformatting them is $50,000,000.)* This cooperative approach was built directly into the Penn Library's preservation norms and into the decision trees that will drive the operational process once it gets started.

The national level of activity also formed the context of another aspect of the Penn Library's strategic planning--the decision to require high-resolution (rather than standard) filming as the preservation norm for all reformatting programs of the Penn Library. In the United States, optical recording technologies are currently developing very rapidly as a potential storage medium for information in libraries. High-resolution filming will provide a direct path to better quality image-transfer when optical disc formats become the norm, as they are widely expected to, in five to ten years. At the regional level, this high-resolution technology is only a few months away from being available at MAPS. National trends, developing technologies, regional service providers, and the availability of new equipment make high-resolution filming a clear and rational preservation norm for Penn.

Both of these aspects of the Penn Library's strategic plan illustrate the importance of bringing the national and regional perspectives to bear on each decision point in the planning process. Awareness of currently available technologies and the prospects, testing results, and projected level of success of each of them, places in the hands of each university planning team an array of options that cannot be made available or developed within the university itself. Most institutions cannot afford to purchase or operate the high-resolution 35mm microfilm

cameras, but their availability and proximity through service organizations makes them an excellent resource for saving certain categories of materials.

Library preservation is an undertaking that is both "high tech" and a shared concern: it is an undertaking in which strategic planning at the very outset needs to be undertaken within the larger context of national and regional resources. There is much that individual libraries will have to continue to do for themselves, within their own walls, but there is also much that they can only accomplish as cooperating members of the larger regional and national communities.

It was evident at the end of the project that a significant amount had been accomplished but much more had to be done before a comprehensive preservation plan was in place. It was interesting to observe that, even though we were just doing the outer edges of the strategic plan, we were still able to do some **operational planning** to 1) envision the organization and administration of the preservation program, 2) project operational budgets for several years, and 3) write general procedures for internal operations. The order in which tasks are done in these planning projects needs not, indeed should not, follow a rigid path from research to goals to strategy to operational planning. One can do smaller sets of activities in each area and then build on that experience as the next group of tasks is considered.

X. CONCLUSIONS

It is evident that closer working relationships between the regional preservation service centers in the Philadelphia area (CCAHA and MAPS) and the Penn Library can exist. Key to this is the willingness of each organization to consider making certain changes that would benefit each other. There is no doubt that economics plays a very important role in binding these relationships, and both parties need to be sensitive to this key issue.

It is also clear that the close proximity of CCAHA and MAPS to the Penn Library makes it feasible to consider the Type A working relationship model. Service contractors offering mass deacidification may offer staff to prepare and ship materials for treatment, while library binding and photocopying vendors will most likely be involved in a more standard customer/vendor relationship. With this in mind, it appears possible in principle to establish a preservation program at the Penn Library that derives a significant percentage of operating staff, space, and equipment from external contractors. However, it is also true that a modest level of internal library staff must and will be involved in making the program work efficiently on a day-to-day basis, since preservation operations will cut across many departmental lines and involve personnel in these areas in selection decisions and materials processing.

It proved possible for the Penn Library to assemble collection condition information, set goals, and make certain strategic decisions within the allotted time. These decisions will now allow the Library to proceed along the strategic path for the implementation of the preservation program as funding becomes available. It also was possible to consider local planning decisions in the light of national and regional developments and to make informed decisions about the direction of the local program. On the other hand, it was not realistic to think that a comprehensive preservation plan for a library system the size of the University of Pennsylvania's could be completed in a twelve-month period: a more realistic time for completing a strategic preservation plan for an institution of this size would have been two years at an effort level of 1.5 to 2 "man-years" per year.

The consultant-driven planning model showed considerable merit in this instance, because more management and technical support was needed to accomplish this planning project than the Penn Library staff could provide. The idea of one person, in this case the senior consultant, having the responsibility of keeping watch over the project on a daily basis allowed Penn Library managers to take part in the project when they needed to be involved and relieved them of the many details of ongoing project management. Moreover, the presence of expert consultants on the project allowed input of vital technical information which was not available on the Penn Library's staff. The mix of internal and external resource persons worked very well on committee assignments and in the efficient gathering of information on the collections.

Precisely how this consultant-driven approach to planning or a contractor-staffed preservation effort might be configured at institutions other than the University of Pennsylvania is a matter for local consideration and adaptation to local circumstances. We hope that some of the concepts presented in this report will be worth considering by any library contemplating a preservation planning project.